

REMARKS:

In view of the foregoing amendments, Applicants respectfully request reconsideration of the outstanding Office Action rejections. Claims 39, 52, 53, 57, 68, 71 and 74 have been amended to further distinguish the instant claims over the cited documents. Support for these amendments can be found in the present specification at page 3, lines 10-14 and at page 4, lines 27-29. No new matter has been added.

The instant claims stand rejected under 35 U.S.C. 103(a) as unpatentable over Armitage et al. (U.S. Patent No. 5,696,165) in view of Arvanitidou et al. (WO 96/19982). Applicants respectfully request reconsideration of the outstanding rejection in view of the following remarks.

Applicants respectfully assert that the term "non-effervescent" is not an intended use but defines the physical features of the claimed dosage form, and means the dosage form does not include an ingredient which may react with another component of the dosage form in an effervescent reaction. The inclusion of this term alone distinguishes the claimed dosage form over the effervescent dosage forms disclosed in Armitage.

The solid effervescent dosage forms of Armitage et al. are only disclosed at column 4, lines 10-22 and at Examples 17 (tablet) and Example 18, (uncompressed granules). It is clear from these disclosures that such dosage forms necessarily include a pharmaceutically effervescent couple such as an acidic agent which reacts with a basic agent, such as, sodium bicarbonate or sodium carbonate. Furthermore, this necessity is evident from Example 17 which discloses citric acid and sodium bicarbonate and from Example 18, which discloses malic acid and sodium bicarbonate/carbonate. Applicants respectfully

submit that the present amendments now positively distinguish the claims over Armitage et al.

The solid non-effervescent compressed dosage forms are disclosed in Armitage at column 2, line 66 to column 3, line 64, column 4, lines 23-26 and at Examples 12-14, 19 and 22. Applicants note that nowhere in Armitage et al. is there a teaching or fair suggestion of sodium carbonate or a teaching or fair suggestion that mixing sodium carbonate with the sodium salt of (S)-ibuprofen would, or even could, provide a resulting mixture that exhibits improved flowability and compressibility, thereby allowing the mixture to be compressed directly into tablets as it does not stick to the punches of the tableting machine. In this respect, it is noted in Examples 12-14, 19 and 22 that (S)-ibuprofen is granulated prior to compression. This is one of the problems the present invention solves with respect to the sodium salt of racemic ibuprofen (see page 7, lines 21-30 of the present specification).

Furthermore, the inclusion of the sodium carbonate enhances the compressibility of the pharmaceutical composition. The composition used to form the compressed dosage form may be compressed by applying compression forces of standard tableting machines to produce a compressed dosage form that exhibits improved hardness while maintaining a suitably fast disintegration time to permit a faster therapeutic action compared with a compressed non-effervescent composition that doesn't include sodium carbonate, such as those described by Armitage et al. (page 2, lines 1-20 and page 3, lines 8-14). This effect is clearly demonstrated by the results of figures 1 and 2 and described at page 30. Nowhere in Armitage et al. is it disclosed that using sodium carbonate in a pharmaceutical mixture

used for making non-effervescent compressed dosage forms results in the above described advantages.

Applicants respectfully submit that it is not obvious to one of ordinary skill in the art to remove malic acid and sodium bicarbonate from the effervescent granules disclosed in Example 18. Furthermore, it would not have been obvious to one of ordinary skill to compress the resulting mixture to form a non-compressed dosage form in light of the disclosure at column 4, lines 23-26.

Armitage does not teach or fairly suggest the advantages provided by the present invention that result from inclusion of sodium carbonate in a pharmaceutical composition comprising racemic ibuprofen, a disintegrant and a compressible filler that is compressed to form a non-effervescent compressed dosage form. Applicants respectfully submit that there is no motivation in Armitage et al. to perform the modifications suggested in the outstanding Office Action.

The effervescent and non-effervescent compositions disclosed in Armitage et al. are present as distinct and separate embodiments described in great detail. Applicants respectfully submit that one of ordinary skill in the art who wished to produce a compressed non-effervescent dosage composition reading on Armitage et al. would merely follow the teachings therein to produce a composition which would not include sodium carbonate. Furthermore, one of skill in the art would not be motivated to remove the effervescent couple from Example 18 of Armitage et al. because Example 18 is a preferred embodiment, described in great detail, that is directed to an effervescent composition in granular form.

It is well recognized by one of ordinary skill in the art that both sodium carbonate and sodium bicarbonate, along with malic acid, form the fundamental components of an effervescent couple. Applicants respectfully submit that one of ordinary skill in the art would be motivated to remove all three components (sodium carbonate, sodium bicarbonate and malic acid) from the teachings of Armitage et al. at Example 18 because Armitage et al. does not teach or fairly suggest any advantages of not removing sodium carbonate, particularly in relation to the sodium salts of ibuprofen.

With respect to Arvanitidou et al., Applicants respectfully submit that this disclosure is directed to solving a completely different technical problem than that of the present invention. Arvanitidou et al. relates to forming water soluble compositions of ibuprofen in the form of the free acid (see page 1, paragraph 5 and page 5, paragraph 4). Arvanitidou solves the problem by forming a non-effervescent or effervescent granular composition employing a specific granulation procedure using a premix of ibuprofen and an alkali metal salt, i.e., sodium carbonate. Arvanitidou et al. relates solely to the use of ibuprofen in the form of the free acid and does not teach or fairly suggest salts of ibuprofen or, more specifically, sodium salts of racemic ibuprofen.

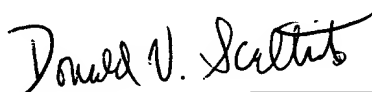
Is it known by one of ordinary skill in the art that sodium carbonate, when added to sodium salts of ibuprofen, becomes sticky, flaky and hygroscopic compared to the easier to handle ibuprofen free acid (page 7, lines 21-26 of the present specification). Arvanitidou et al. does not teach or fairly suggest adding sodium carbonate to sodium salts of ibuprofen would, or even could, provide a mixture having improved flowability and compressibility to

allow the formation of a compressed non-effervescent tablet having improved hardness and a suitably fast rate of disintegration. The clear distinction of the use of sodium salts of ibuprofen and ibuprofen free acid in non-effervescent compressed tablets containing sodium carbonate for improved hardness and suitable disintegration times is highlighted at Example 22 and 23 of the present specification.

In view of the foregoing amendments and remarks, Applicants respectfully request reconsideration and withdrawal of the outstanding Office Action rejections. Early and favorable action is awaited.

Respectfully submitted,

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